

REMARKS

Claims 1-12 are pending and under consideration in the above-identified application.

In the Office Action dated March 25, 2008, the Examiner rejected claims 1-12.

With this Amendment, claims 1-12 were amended. No new matter has been introduced as a result of these amendments.

I. 35 U.S.C. § 102 Anticipation Rejection of Claims

Claims 1, 2 and 6 were rejected under 35 U.S.C. § 102(b) as being anticipated by Saito et al. (US Publication No. 2002/0031465). Applicant respectfully traverses this rejection.

Claim 1 requires a field electron emission film that is made of an ink having a carbon nanotube structural body of 0.001 to 40% by weight and a heat-decomposable metal compound dispersed therein. The ink is coated and sintered on the cathode or electrode substrate such that the heat-decomposable metal compound is decomposed to a heat composition product and the heat decomposition product has adhesive properties imparted by the sintering. As such, the field electron emission film is adhesive, dense and has less residual gas content. Specification, Page 9.

Saito et al. teaches a field electron emission film made of a carbon nanotube structural body and a heat decomposition compound. Saito et al. does not, however teach or even fairly suggest a field electron emission film including an ink that is coated and sintered on a surface resulting in a field electron emission film having a heat composition product that is adhesive. As such, independent claim 1 is patentable over the cited reference as are dependent claims 2 and 6 for at least the same reasons. Accordingly, Applicant respectfully requests that the above rejection be withdrawn.

II. 35 U.S.C. § 103 Obviousness Rejection of Claims

Claims 3-4 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Saito et al. in view of Talin et al. (US Publication No. 2003/0111946). Applicant respectfully traverses this rejection.

Talin et al. teaches a heat-decomposable metal compound that is a metal salt or an organo-metallic salt compound to provide an emission film that does not require mechanical polishing and has a more uniform distribution. Talin et al., Paragraphs 8 & 14. Talin et al. does not, however, teach or even fairly suggest an emission film that contains an ink, which is coated and sintered on a surface, creating an emission film that is an adhesive. In fact, Talin et al. specifically teaches an emission film that does not require mechanical polishing and that has a more uniform distribution.

As discussed above, Saito et al. does not teach or even fairly suggest an emission film that is adhesive. Furthermore, Saito et al. does not teach or even fairly suggest using an organo-metallic salt compound in an emission film. As such, the cited references taken singularly or in combination with each other, fail to teach or suggest all the limitations of claims 3-4. Accordingly, Applicant respectfully requests that the above rejection be withdrawn.

Claim 5 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Saito et al. in view of Akiyama et al. (US Patent No. 6,914,372). Applicant respectfully traverses this rejection.

Akiyama et al. teaches a heat-decomposable metal compound that is a metal complex in order to provide a device that is easier to assemble and more stable under operating conditions. Akiyama et al., Col. 10, lines 17-23. Akiyama et al. does not teach or even fairly suggest using a metal complex as an adhesive in field emission device. Additionally, Saito et al. does not teach

or even fairly suggest using a metal complex in a field emission film. Furthermore, as discussed above Saito et al. does not teach or even fairly suggest a field emission film that is adhesive. As such, taken singularly or in combination with each other, the cited references fail to teach or even fairly suggest the requirements of claim 5. Thus, claim 5 is patentable over the cited references. Accordingly, Applicant respectfully requests that the above rejection be withdrawn.

Claims 7-8 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Saito et al. in view of Kajiwarra et al. (US Publication No. 2003/0102797). Applicant respectfully traverses this rejection.

Kajiwarra et al. teaches a plurality of metals that include Sn and In in field emission devices. Kajiwarra et al. Table 1. Kajiwarra et al. does not, however, teach or even fairly suggest using a plurality of metals that includes Sn and In in a field emission film. Furthermore, as discussed above, Saito does not teach or even fairly suggest a field emission film that is adhesive. As such, taken either singularly or in combination with each other, the cited references fail to teach or even suggest all the required elements of claims 7 and 8.

Claim 9 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Saito et al. in view of Filas et al. (US Patent No. 6,741,019). Applicant respectfully traverses this rejection.

Filas et al. teaches a thickness in a field electron emission film that is 0.05 μm to 20 μm . Filas et al. Paragraph 13. Filas et al. does not, however, teach or even fairly suggest a field emission film that is adhesive as required by claim 1. As discussed above, Saito does not teach or even fairly suggest an emission film that is adhesive. Accordingly, it would not have been obvious to one of ordinary skill in the art to combine the thickness of the film in Filas et al. with the emission film as taught by Saito in order to get the field emission film required by claim 1. Accordingly, since claim 9 is dependant on claim 1, claim 9 is patentable over the cited

references for at least the same reasons. Accordingly, Applicant respectfully requests that the above rejection be withdrawn.

Claims 10-12 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Akiyama et al. in view of Saito et al. Applicant respectfully traverses this rejection.

Claims 10, 11 and 12 require a field electron emission film that is made of an ink having a carbon nanotube structural body of 0.001 to 40% by weight and a heat-decomposable metal compound dispersed therein. The ink is coated and sintered on the cathode or electrode substrate such that the heat-decomposable metal compound is decomposed to a heat composition product that has adhesive properties. As such, the field electron emission film is adhesive, dense and has less residual gas content. Specification, Page 9.

Akiyama et al. teaches a device that has a cathode, an insulating film, a gate electrode and a field emission film on the cathode. Akiyama et al., Figure 7. As discussed above, Akiyama et al. fails to teach a field emission film that is adhesive. Furthermore, as discussed above Saito et al. fails to teach a field emission film that is adhesive. As such, it would not have been obvious to one of ordinary skill in the art to combine the references to get a field emission film that is adhesive as required by claims 10, 11 and 12. Accordingly, the cited references singularly or in combination with each other fail to teach or suggest all the required elements of claims 10, 11 and 12. Thus, claims 10, 11 and 12 are patentable over the cited references. As such, Applicant respectfully requests that the above rejection be withdrawn.

III. Conclusion

In view of the above amendments and remarks, Applicant submits that all claims are clearly allowable over the cited prior art, and respectfully requests early and favorable notification to that effect.

Respectfully submitted,

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